

REMARKS

Claims 1 and 3-13 are now pending in the application. Claim 2 has been cancelled. Claims 1, 10 and 12 are currently amended. Support for these amendments may be found throughout the specification as originally filed and on Page 12 lines 15-2, Page 13 lines 15-17, Page 18 lines 7-10, for example. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

Examiner Interview

Applicants' representatives appreciated the opportunity to conduct a telephonic interview with the Examiner on March 6, 2006, during which the cited art and claim rejections were discussed. Applicants would like to thank the Examiner for the courtesies extended. Applicants pointed out the deficiencies in the cited art. The Examiner and Applicants' representative discussed potential claim amendments, which the Examiner indicated appear to be allowable in light of the rejections and the cited art. However, no agreement was reached, as the Examiner wished to review the proposed claim amendments in a written response and wished to further consider the amendments in a request for continued examination (RCE). In view of these discussions, independent Claims 1, 10, and 12 have been amended, and Applicants respectfully request reconsideration and allowance of these claims and those that depend therefrom.

REJECTION UNDER 35 U.S.C. § 102

Claims 1, 3-7, 10 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Matsumura et al. (U.S. Pat. No. 6,419,732). This rejection is respectfully traversed.

Independent Claims 1, 10, and 12 have been amended to more particularly point out and distinctly claim the invention. Claims 1, 10, and 12 commonly recite a water soluble substance that is a hydrolyzate of three distinct compounds. A first compound comprises an alkoxysilane comprising an amino group. The second compound comprises an alkoxysilane having a hydrophobic group. The third compound comprises an alkoxysilane without an amino group. Further, as recited in the claims, this water-soluble hydrolyzate is condensation polymerized in the absence of water to form a network so as to enclose a colorant.

Matsumura only discloses reacting two compounds, specifically a hydrolyzable alkoxysilane having an amino group optionally containing a halogenated alkyl group (A) and a hydrolyzable silane having an alkoxy group (B). Matsumura does not disclose a water-soluble substance that is a hydrolyzate of three distinct compounds, namely a first alkoxysilane comprising an amino group, a second alkoxysilane comprising a hydrophobic group, and a third alkoxysilane without an amino group. Matsumura only discloses an optional halogenated alkyl group in the same compound where the amino group is present (compound "A"), but does not disclose a water-soluble compound that is a hydrolyzate of three distinct moieties. (See Col. 2 Equation (1), lines 35 -41 and 64-66, for example.)

EP 0738771 discloses active ingredients that are formed from compounds that are hydrolyzed and further undergo a condensation reaction. See e.g., Page 11 lines 54-55, Page 12 line 16, Page 14 lines 52-55. In the claimed invention, the hydrolyzed compound in the ink must be capable of undergoing a condensation polymerization reaction in the absence of water to form the network around the colorant. Thus, the active ingredients in EP 0738771 are incapable of undergoing a condensation reaction in the absence of water, because they have already undergone the condensation reaction. Thus, none of the references disclose a water-soluble substance in an ink composition that is a hydrolyzate of a first compound, a second compound, and a third compound, where the substance undergoes a condensation polymerization reaction in the absence of water to form a network so as to enclose the colorant. Applicants request reconsideration of the rejections of Claims 1, 3-7, 10 and 12, and respectfully submit that neither Matsumura nor EP 0738771 anticipate the claims as amended.

REJECTION UNDER 35 U.S.C. § 103

Claims 8, 11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumura et al. (U.S. Pat. No. 6,419,732) in view of Blease et al. (U.S. Pat. No. 6,585,362). Claims 1-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Blease et al. in view of EP 738771. Claims 1-7, 9, 10 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumura et al. in view of EP 738771. Claims 8, 11 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsumura et al. in view of EP 738771 as applied to Claims 1-7, 9, 10 and 12 above and further in view of Blease et al. These rejections are respectfully traversed.

Applicants respectfully submit that there is no suggestion or motivation in Matsumura to provide a water-soluble substance that is a hydrolyzate of a first compound, a second compound, and a third compound, as recited in amended Claims 1, 10, and 12. The first compound comprises an alkoxysilane comprising an amino group. The second compound comprises an alkoxysilane having a hydrophobic group. The hydrophobic group is contained on a separate moiety from the amino group, which is hydrophilic. The third compound comprises an alkoxysilane without an amino group.

The Matsumura reference only discloses a compound that has an amino group on the same moiety as the halogen group (compound "A") and in this regard, the close proximity of the halogen and/or alkyl group to the amino group could detrimentally affect the water-solubility of the compound. Further, the close proximity of the amino group and the halogen group may not provide the necessary hydrophobicity to the network that encloses the colorant. In this regard, the three distinct moieties (i.e., the first, second, and third compounds) of the alkoxysilane with the amino group, the alkoxysilane with the hydrophobic group, and the alkoxysilane without the amino group, provide physical separation in the water-soluble substance and subsequent network after the condensation polymerization to provide desired water-solubility, but also provide hydrophobicity of the network to protect the colorant. There is no suggestion or motivation in Matsumura to modify the disclosed compounds to arrive at the compounds as presently claimed.

Likewise, EP 0738771 fails to provide the necessary motivation or suggestion to arrive at the invention in amended Claims 1, 10, and 12. EP 0738771 indicates that A, B and/or C components that form the active ingredient are intentionally hydrolyzed and then

also condensed in a polymerization reaction (See e.g., Synthesis Examples 1 – 10 on Pages 15 – 16 and Synthesis Examples 11-18 on Page 19). These compounds appear to be incapable of undergoing a condensation reaction in the absence of water because the condensation polymerization has already occurred. In this regard, EP 0738771 fails to account for the deficiencies of the Matsumura reference, and neither of these references, as combined or individually, renders amended Claims 1, 10, and 12 obvious. Nor do these references render dependent Claims 3-9, 11, or 13 obvious. Applicants respectfully request reconsideration and allowance of the claims.

CONCLUSION

In view of the above amendment, Applicants believe the pending application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

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Respectfully submitted,

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